REMARKS

This application has been reviewed in light of the Office Action dated January 9, 2008. Claims 1, 3, and 8 are presented for examination. Claims 1, 3 and 8 have been amended to define more clearly what Applicants regard as their invention. Claims 1, 3 and 8 are in independent form.

Claims 1, 3, and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2001/0039161 (*Sato*) in view of U.S. Patent No. 6,638,128 (*Suzuki*).

Before addressing the rejection, an example aspect of the invention to which the claims relate will first be addressed.

Owing to a temperature difference between the outside and inside of a vessel, uneven thermal expansion often results which can cause a crack in a part of the substrate extending over the inside and outside of the vessel. According to an example aspect of the invention, first and second temperature adjusting mechanisms are provided to reduce the temperature difference during energization, and to thereby prevent or otherwise substantially avoid cracking in the substrate. While the process conditions (e.g., atmosphere and pressure) are not germane to this example aspect of the invention, limitations relating to a temperature difference between an inside and outside of the vessel can be overcome.

Claims 1, 3, and 8 have been amended to clarify that a temperature of the second temperature adjusting mechanism is higher than that of the first temperature

adjusting mechanism so as to reduce a temperature difference, caused by a difference of a heat transfer to an atmosphere, between the area of the part of the substrate inside the vessel and the area of the substrate outside the vessel. Support for these features appears in the specification and drawings as originally filed (*see, e.g.*, paragraph (0052) of the published version of the application).

The Office Action concedes that *Sato* does not disclose or suggest that "a configuration of the substrate, vessel, and temperature adjusting mechanism wherein the temperatures of the first and second mechanisms can be adjusted independently in combination with the claimed vessel-substrate configuration...."

The Office Action then cites col. 25, line 50 to col. 26, line 10 of *Suzuki*, as teaching "heater units and cooling tubes . . . provided to eliminate temperature differences generated between the device region (area covered by the vessel in Sato) and a peripheral region (area no covered by the vessel in Sato). It is respectfully submitted, however, that the Examiner's interpretation of col. 25, line 50 through col. 26, line 10, is incorrect. In particular, col. 25, lines 43-48 states as follows:

> "The atmosphere for performing the activation can be realized by disposing the multi-electron source substrate 102 in the vacuum chamber 101 as similar to FIG. 1. A difference of this embodiment from the foregoing embodiment is the substrate supporting base 103, and FIG. 28 shows the substrate supporting base in this embodiment." (Emphasis added)

According to the foregoing teaching, the supporting base 103 in Fig. 28 of *Suzuki*, as a whole, is similar to the substrate supporting base 103 in Fig.1, and thus is inserted completely within the chamber 101 as shown in Fig. 1. No part of the supporting

base 103 is disposed outside of the chamber 101, unlike part of the substrate disposed outside the vessel in the present claims.

Moreover, nothing in either *Sato* or *Suzuki* would teach or suggest a temperature of a second temperature adjusting mechanism being higher than that of a first temperature adjusting mechanism so as to reduce (Claim 1) or compensate for (Claims 3 and 8) a temperature difference, caused by a difference of a heat transfer to an atmosphere, between the area of the part of the substrate inside the vessel and the area of the substrate outside the vessel, as set forth in the relevant independent claims herein.

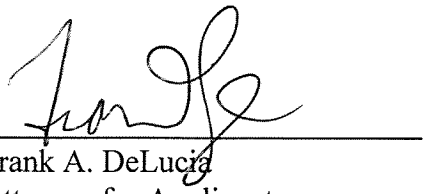
Neither is *Sato* seen to address or even recognize a problem resulting from a temperature difference between an inside and an outside of a vessel. Accordingly, there would have been no reason why one skilled in the art would have even consulted that reference, let alone been motivated to combine it with *Suzuki* as proposed in the Office Action.

For the foregoing reasons, it is believed that each independent claim is clearly patentable over *Sato* and *Suzuki*, whether considered separately or in combination.

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration and allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



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